

U.S.S.N. 10/658,709

Claim Amendments

Please amend claims 1, 2, 9, 13, 17, 19, 20, 21 and 25 as follows:

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Listing of Claims

1. (currently amended) A primer tank for generating a primer vapor for treating a substrate with reduced primer droplet formation comprising:

a tank body for containing a liquid primer to form an exposed surface of said liquid primer, said exposed surface comprising a liquid vapor interface; and,

a nozzle assembly comprising a nozzle plate, said nozzle plate comprising a plurality of openings, said plurality of openings disposed above said exposed surface and arranged for impacting directing a plurality of gas streams onto said exposed surface to form said primer vapor in a vapor collection space above said liquid vapor interface.

2. (currently amended) The primer tank of claim 1 wherein said nozzle assembly further comprises:

a gas inlet pipe for receiving a primary gas stream and [[a]] said nozzle plate provided in downstream fluid communication with said gas inlet pipe;

wherein said nozzle plate comprises [[a]] said plurality of

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nozzle openings for dividing said primary stream into said plurality of gas streams.

3. (original) The primer tank of claim 1 further comprising a level sensor provided in said tank body for sensing a level of the liquid primer in said tank body.

4. cancelled

5. (previously presented) The primer tank of claim 1 further comprising a vapor outlet for distributing the primer vapor from said vapor collection space to a downstream process.

6. cancelled

7. cancelled

8. cancelled

9. (currently amended) A primer tank for generating a primer vapor for treating a substrate, comprising:

a tank body for containing a liquid primer to form an

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exposed surface of said liquid primer; and,

a nozzle assembly provided in said tank body, said nozzle assembly having a gas inlet pipe for receiving a primary gas stream; a housing having a housing interior provided in fluid communication with said gas inlet pipe; and a nozzle plate in downstream fluid communication with said housing, said nozzle plate having plurality of ~~nozzle~~ openings for receiving the primary gas stream and ejecting a plurality of secondary gas streams onto ~~[[an]]~~ said exposed surface of said liquid primer to create a primer vapor in a vapor collection space above said exposed surface.

10. (original) The primer tank of claim 9 further comprising a level sensor provided in said tank body for sensing a level of the liquid primer in said tank body.

11. (original) The primer tank of claim 9 further comprising a vapor outlet tube provided in fluid communication with said tank body for distributing the primer vapor from said tank body.

12. cancelled

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13. (currently amended) The primer tank of claim 9 wherein said plurality of nozzle openings are arranged in a plurality of radially-extending rows on a plate surface of said nozzle plate, said plate surface arranged above said exposed surface.

14. cancelled

15. cancelled.

16. cancelled.

17. (currently amended) A method of generating a primer vapor from a liquid primer for treating a substrate to reduce primer vapor droplet formation comprising the steps of:

providing a primer tank having a tank body;

providing the liquid primer in said tank body to form an exposed surface of said liquid primer, said exposed surface comprising a liquid vapor interface;

~~impacting~~ directing an inert gas comprising a plurality of gas streams formed from a nozzle plate comprising a plurality of

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openings onto said exposed surface to form a vapor above said liquid vapor interface, said vapor comprising said liquid primer and said inert gas; and,

transferring said vapor to a downstream process.

18. (original) The method of claim 17 wherein said liquid primer comprises hexamethyldisilazone.

19. (currently amended) The method of claim 17 wherein said plurality of gas streams are ~~impacted~~ directed onto said exposed surface at subatmospheric pressures.

20. (currently amended) The method of claim 17 wherein the step of directing comprises:

providing a primary gas stream;

dividing said primary gas stream into said plurality of gas streams according to ~~[[a]]~~ said plurality of openings disposed above said exposed surface; and,

directing said plurality of gas streams against said exposed

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surface and collecting said vapor in a vapor collection space disposed above the vapor liquid interface.

21. (currently amended) The method of claim ~~[[21]]~~ 20, wherein said plurality of openings ~~[[is]]~~ are ~~disposed in a plate surface~~ arranged in a plurality of radially-extending rows on said nozzle plate surface ~~above said exposed surface~~.

22. (previously presented) The method of claim 17, wherein said inert gas comprises nitrogen.

23. (previously presented) The method of claim 17, wherein said downstream process comprises treating a semiconductor process wafer with the primer vapor, said downstream process at a relatively lower pressure than the vapor collection space.

24. (previously presented) The primer tank of claim 5, wherein said downstream process is maintained at a lower pressure relative to said vapor collection space.

25. (currently amended) The primer tank of claim ~~[[2]]~~ 1 wherein said plurality of ~~nozzle~~ openings are arranged in a plurality of radially-extending rows on said nozzle plate surface.

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